

Appl. No. 09/171,910

a marked up version has not been changed relative to the immediate prior version, except that marked up versions are not being supplied for any added claim or canceled claim.

Cancel all pending claims in favor of new claims as follows.

*SUB
rule 72b*
~~55~~
55. (New) Plastic-based composite product comprising a plastic mass in which particles are homogeneously embedded, which particles have tensile strength in a first particle direction, said product having a chosen principal product direction,

61
wherein the particles comprise:

small particles being elongated plates or fibres and having a random orientation and a length of 0.2-2 mm; and

large particles dominantly orientated such that their first particle direction is in said chosen principal product direction, said large particles having a length in the first particle direction of about 2-6 mm.

~~56~~
56. (New) Product as claimed in claim ~~55~~, wherein the particles are elongated.

~~57~~
57. (New) Product as claimed in claim ~~56~~, wherein the particles are made of wood material.

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~~58~~⁵⁹. (New) Product as claimed in claim ~~57~~⁵⁸,

wherein the wood particles consist of a material selected from the group consisting of fir, spruce, birch and poplar.

~~59~~⁶⁰. (New) Product as claimed in claim ~~58~~⁵⁹,

wherein the large particles are fibres wherein the first particle direction is the longitudinal direction of each fibre.

~~60~~⁶¹. (New) Product as claimed in claim ~~59~~⁶⁰, wherein the plastic mass is a thermoplastic polymer.

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⁶²
~~61~~ (New) Product as claimed in claim ⁶¹~~60~~,

wherein the particles include particles of wood material, wherein said wood material particles have a transverse dimension perpendicular to said first particle direction, the ratio between the length in the first particle direction and said transverse dimension amounting to a minimum of 4, wherein the wood particles are present in the plastic mass in a quantity of 40-80% by mass, and wherein the product complies with the following requirements relating to mechanical properties in

- bending strength in the first particle direction: at least 8 MPa
- bending modulus in the first particle direction: at least 3 GPa
- tensile strength in the first particle direction: at least 6 MPa
- tensile stress modulus in first particle direction: at least 3 GPa
- tensile strength transversely of first particle direction: at least 0.3 MPa
- tensile stress modulus transversely of first particle direction: at least 1 GPa.

⁶³
~~62~~. (New) Product as claimed in claim ⁶²~~61~~, wherein the ratio lies in the range of 6-80.

⁶⁴
~~63~~. (New) Product as claimed in claim ⁶³~~62~~, wherein the wood particles are present in the plastic mass in a quantity of 50-70% by mass.

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~~63~~ 64. (New) Product as claimed in claim ~~60~~⁶¹, wherein the polymer is a polyolefine.

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~~65~~⁶⁶ 65. (New) Product as claimed in claim ~~64~~⁶⁵, wherein the polyolefine material is a material selected from the group consisting of polypropylene, polystyrene, polyethylene or polyacrylate.

~~66~~⁶⁷ 66. (New) Product as claimed in claim ~~61~~⁶², including particles of non-wood material present in the plastic mass in a quantity of 3-25% by mass, wherein the particles include fibres of natural cellulose polymer.

~~67~~⁶⁸ 67. (New) Product as claimed in claim ~~66~~⁶⁷, wherein the fibres of natural cellulose polymer are made from a material selected from the group consisting of flax, jute, hemp, sisal, coconut, bamboo and miscanthus.

~~68~~⁶⁹ 68. (New) Product as claimed in claim ~~61~~⁶², including particles of non-wood material present in the plastic mass in a quantity of 3-25% by mass, wherein the particles include glass fibres with a length of 4-5 mm and a diameter of 0.013 mm and a ratio of length to diameter in the range of 300-400.

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⁷⁰
~~69.~~ (New) Product as claimed in claim ⁵⁶~~55~~, wherein the particles are plate-shaped having a main plane, the first particle direction extending in said main plane.

⁷¹
~~70.~~ (New) Product as claimed in claim ⁵⁶~~55~~, wherein the product is elongated and the chosen principal product direction is the longitudinal direction of the product.

⁷²
~~71.~~ (New) Product as claimed in claim ⁵⁶~~55~~, further comprising an additive with a desired influence on chosen properties of the product and selected from the group of additives consisting of the following classes:

- influencers of adhesion between particles with tensile strength and matrix polymer (class H),
- influencers of the properties of the surface of the product, particularly in respect of coatings or adhesives for applying in sandwich structures (class O),
- influencers of the pyrogenic properties (class P),
- influencers of the particle durability (class D),
- blowing means for obtaining a foamed structure (class B).

⁷³
~~72.~~ (New) Product as claimed in claim ⁵⁶~~55~~, comprising at least one colouring agent or pigment.

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~~74~~
73. (New) Product according to claim ~~55~~⁵⁶,

wherein the product forms a first plate-shaped layer, a skin layer being adhered to at least one of the sides of the plate-shaped layer.

~~75~~
74. (New) Laminated product comprising a plurality of products according to claim ~~55~~⁵⁶, wherein the products are plate shaped and have main planes, wherein the plate-shaped products are adhered to one another.